Mumbai University

May – 2018

B.Sc.IT: Semester – V

(Question Paper)

[IDOL – Old Course]

Elective – II

GIS

Time: 3 Hours **Total Marks:** 100

N.B.: **(1)** *Question No. 1 is Compulsory.*
(2) *Attempt any four from Question Nos. 2 to 7.*
(3) *Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.*
(4) *Answer To The Same Question Must Be Written Together.*
(5) *Number To The Right Indicates Marks.*
(6) *Draw Neat Labeled Diagrams Wherever Necessary.*

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) What is a Map and what are its types? **(5)**
(B) Explain the Relevance of Geographic Information Systems in Information Technology. **(5)**
(C) Explain the Social and Institutional Context of Geographic Information System. **(5)**
(D) Explain Raster Model of Data Representation in a Geographic Information System. **(5)**

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Explain the components of Geographic Information System. **(8)**
(B) Explain the different types of data in Geographic Information System. **(6)**
(C) Explain the concept of neighborhood operations in detail with example. **(6)**

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Explain the various Modes of Scanning. **(8)**
(B) What is Digitization Scheme? **(6)**
(C) Explain the Importance of Geographic Information System in Transportation System. **(6)**

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Explain Vector Data Model of Data Representation. **(8)**
(B) Explain Physical Distance Measures using an example. **(6)**
(C) Write short notes on Theissen Polygon & Density Estimation. **(6)**

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Define Geographic Grid and explain its characteristics. **(8)**
(B) What are the applications of Geographic Information System? **(6)**
(C) What is Map Resolution and its types? **(6)**

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Explain Spatial Autocorrelation. **(8)**
(B) Define Zonal Operations & explain its applications. **(6)**
(C) Differentiate between Spatial and Aspatial Data. **(6)**

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

(A) Define Co-Ordinate System. Explain its significance. What are Co-Ordinate Transformations? **(8)**
(B) Explain Terrain Map and Analysis in detail. **(6)**
(C) What is Map Projection? List and explain its types. **(6)**